



Environmental Solutions

Klozur™ Activated Persulfate

Pilot Study: Base Catalyzed Klozur Persulfate

Site: Former MGP Site in Maryland

Chemicals of Concern: BTEX - (vadose & saturated zone)
Naphthalene - (vadose & saturated zone)
Lowest Conc: 1,800 ppb
Highest Conc: 300,000 ppb

Treatment Approach: Two approximate 30 X 30 ft sub-areas

Subarea 1 - calcium peroxide
Subarea 2 - calcium peroxide & Klozur persulfate
(to assess synergy of both oxidants)

Backhoe – physically mix oxidant in the vadose zone

➢ 314 total cubic yards treated in upper 6 ft soil mixing horizon

Geoprobe – inject oxidant in 2-ft intervals in saturated zone

➢ 552 total cubic yards treated in the 6-14 ft injection interval

Results:

- 1) Sub-area 1 – CaO_2 = 74% reduction total hydrocarbons
- 2) Sub-area 2 – CaO_2 & Klozur = 90 to 99% reduction total hydrocarbons
(35% CaO_2 : 65% Klozur)

Results Suggest: Full-scale application with persulfate/peroxide could beneficially affect GW quality by eliminating much of the hydrocarbon mass throughout the site. The synergistic effect of both oxidants resulted in greater GW concentration reductions.

